

### **Abstract**

Appliance for determining the impedance ( $Z_{aw}$ ) of the respiratory tract by measuring the alternating pressure ( $dp$ ) in the region of the mouth of a patient after producing an oscillating air pressure signal. Said appliance consists of a mouthpiece, an electroacoustic transducer provided with a mechanical oscillation system for generating the oscillating air pressure signal, a tube for connecting the electroacoustic transducer to the mouthpiece, a reference resistance for determining the reference impedance ( $Z_{ref}$ ), and a computing device for calculating the impedance ( $Z_{aw}$ ) of the respiratory tract on the basis of the reference impedance ( $Z_{ref}$ ) of the reference resistance, the entire impedance ( $Z_{ges}$ ), and the entire phase angle ( $\phi$ ), wherein the change in the deflections of the mechanical oscillation system (2) on the electroacoustic transducer, caused by the alternating pressure ( $dp$ ) of the breathing of the patient, can be measured in a contactless manner by means of at least one measuring device.